Information

Peripheral Venous Diseases

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Varicose Veins

General Comments

The disorder of varicose veins is one of the most common affecting man. This condition is probably the result of a congenital weakness of the venous walls and the valves. The incidence is higher in women than in men. Obesity, pregnancy, prolonged standing, and thrombosis of the deep veins are important contributing factors.

The most common symptoms are those of aching, fullness, or fatigue on standing which is relieved by recumbency or by the wearing of an elastic stocking. It is important in the diagnosis to exclude other conditions such as tension fibrositis, water-retention syndrome, osteoarthritis, or a disk that may be causing symptoms in a patient with varicose veins, for even severe varicosities may be relatively symptomless.

Superficial thrombophlebitis and external hemorrhage are possible complications of varicosities. When severe varicose veins have been present for years, chronic stasis changes may appear, with pigmentation, fibrosis, dermatitis, and ulcerations.

The aim of medical therapy is chiefly to relieve symptoms and to try to prevent the progression of varicose veins. All patients with varicosities should wear elastic stockings, exercise their legs, keep their weight at an ideal level, and, when possible, should sit with the affected leg elevated. They should avoid wearing tight clothing such as garters and panty girdles, and should avoid prolonged standing. It may be helpful to elevate the foot of the bed between 4 and 6 inches to decrease venous pressure while sleeping.

When varicosities are small and the patient wishes treatment for cosmetic reasons, injections of sclerosing solutions may be attempted. For more advanced varicosities, the patient either should wear elastic stockings or else should undergo surgical removal of the affected veins by ligation and stripping. Any varices not removed by these procedures subsequently may be injected with sclerosing solutions as an office procedure.

Superficial Thrombophlebitis

Thrombophlebitis in one of the superficial veins may be caused by trauma, intravenous injections, or may be associated with certain systemic diseases such as blood dyscrasias. Recurrent superficial phlebitis may be the first manifestation of thromboangiitis obliterans or of an occult malignancy, or may occur for no apparent reason.

Superficial phlebitis usually presents as a red, warm, painful, tender nodular area directly under the skin along the course of a vein. Edema is not present. The clot is adherent and is rarely the source of emboli.

Erythema nodosum may be quite difficult to differentiate from superficial phlebitis, and a biopsy may be necessary. Cellulitis should present no problem in differential diagnosis, for the process is more diffuse and there is no palpable cord along the course of the vein. Lymphangitis likewise should present no problem in diagnosis, for again no thrombosed vein is palpable and lymphangitis is associated with chills and a high fever.

Most patients with superficial phlebitis need nothing more than rest and elevation of the extremity and application of warm, moist packs for a few days. When the pain and inflammatory reaction are severe, phenylbutazone or oxyphenbutazone may be given for three or four days.

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When the phlebitis continues to extend despite treatment, anticoagulation therapy should be initiated.

Deep Thrombophlebitis

Deep thrombophlebitis is still one of the more common complications of major surgical operations, pregnancies, fractures or injuries of the lower extremity, or any serious illness that requires the patient to be confined to bed. The increased incidence with congestive heart failure, polycythemia, ulcerative colitis, and carcinomatosis is well known. In many instances, deep thrombophlebitis occurs for no known reason.

Early venous thrombosis may not be recognized clinically because of the absence of local or constitutional signs. The first indication of its presence may unfortunately be the occurrence of pulmonary embolism. However this asymptomatic bland type of venous thrombosis (phlebothrombosis) usually progresses to the more inflammatory state of thrombophlebitis which can be diagnosed clinically.

In the majority of patients the onset of deep phlebitis is gradual and mild, and the symptoms are often mistaken for rheumatism or muscle cramps. The discomfort is described as a dull ache in the calf or in the region of the thigh which is worse on standing, but relieved by recumbency.

The findings in deep phlebitis include edema, distended superficial veins, localized tenderness in the calf region or over the femoral vein, and the presence of Homans' sign with pain in the calf region on dorsiflexion of the foot with the knee in flexion. Usually, only minimal systemic reaction accompanies deep venous thrombosis. A low-grade fever, slight tachycardia, malaise, or a sense of apprehension may be present.

Various methods have been proposed to detect intravenous thrombi, including the use of radioisotopes, ultrasonic flow detection studies, and measurement of electrical impedance. Although these tests hold great promise, venography remains the most definitive method of study and should be done when the diagnosis is in doubt.

Because of the constant threat of pulmonary embolus, anticoagulant therapy with heparin should be started as soon as venous thrombosis has been diagnosed. Heparin is injected intravenously in doses of 5,000 units every 4 to 6 hours, or subcutaneously in doses of 10,000 to 15,000 units every 12 hours. If the diagnosis is in doubt, heparin should be given prophylactically, unless contraindicated, until venography is performed and the issue is settled.

Ligation or clipping of the inferion vena cava is performed in the patient in whom heparin is contraindicated, and in the patient in whom pulmonary embolus develops while he is on anticoagulant therapy.

The patient with deep phlebitis should be kept in bed with his extremity elevated and, if arterial pulses are present, treated with warm, moist packs. After from 5 to 7 days, the tenderness usually subsides and the patient may begin to ambulate. Then, the dosage of heparin is tapered and stopped. When significant edema persists, a well-fitted elastic stocking should be worn until such time that edema no longer appears when the stocking is not worn.

Venous thrombectomy may be considered in massive venous thrombosis, particularly in young, otherwise healthy patients.

Preventive measures against thrombophlebitis include early ambulation after operation, routine wearing of light elastic stockings by patients confined to bed, elevation of the foot of the bed, close attention to fluid balance to prevent dehydration, encouragement of active and passive muscle exercises, and avoidance of tight abdominal dressings.

Chronic Venous Insufficiency

After deep phlebitis, the occluded vein usually becomes recanalized but the valves remain permanently damaged. If the patient does not properly care for his leg and wear a good elastic stocking to control edema, signs of chronic venous insufficiency may develop many months or years after the episode of thrombophlebitis. These changes include chronic edema, pigmentation, induration, and dermatitis. After slight trauma, ulcers develop which may be extremely difficult to heal.

If the patient is seen at a time when he has only edema and pigmentation, preventive measures should be advised to prevent the complications of dermatitis and ulcerations. He should sleep with the foot of his bed elevated on 4 to

6 inch blocks. He must wear a well-fitted elastic stocking when ambulatory. Exercise such as swimming, walking, or bicycling should be encouraged, and prolonged standing or sitting should be avoided. Women should not wear panty girdles or garters.

If a small clean ulceration is present, a modified Unna paste boot is applied to the leg and changed at seven-day to 14-day intervals depending on the progress of the patient. During this period, he can carry on normal activities as long as his occupation does not entail prolonged standing. Most ulcers will heal in from 4 to 12 weeks.

When the ulcer is badly infected with surrounding cellulitis, hospitalization may be necessary. The patient should be put to bed with the foot of the bed elevated, constant soaks applied to the extremity, and systemic antibiotics administered. When the ulcer is clean, the paste boot can be applied.

Very large ulcers will heal more rapidly and have a better chance of staying healed if a skin graft is used. It is important to do a wide excision and remove all the indurated area surrounding the ulcer.

Regardless of the method used in healing the ulcer, the patient must continue to wear elastic stockings and carry out the other prophylactic measures to avoid recurrence of the ulcer.

Selected Items from the FDA Drug Bulletin – October 1971

Methotrexate: Its Use in Psoriasis

Psoriasis has for ages challenged the physician's therapeutic resources. A recurrent disease, it is characterized by exacerbations and remissions which sometimes are difficult to control with conventional therapies.

Some cases of psoriasis which are severe, disabling and resistant to conventional therapy have been effectively treated with the anti-metabolite drug, methotrexate.

The Food and Drug Administration and the FDA's Advisory Committee on Dermatology have reviewed a series of clinical investigations and based on the recommendations of the Advisory Committee, the FDA has concluded that methotrexate is safe and effective for the treatment of certain cases of psoriasis.

The FDA-approved directions for use in these cases will soon be available from the manufacturer Lederle Laboratories, and should be reviewed carefully before the drug is used in the treatment of psoriasis.

The labeling of methotrexate restricts its use in psoriasis to severe, disabling, proven cases recalcitrant to more conservative treatment and makes the following recommendations:

—screening of patients by all appropriate parameters to exclude administration of methotrexate to pregnant women and to patients with preexisting renal, hepatic, or hematopoietic disease;

—screening of patients to disclose any preexisting infections that might be activated by use of an immunosuppressive agent; and

—ensuring the availability of facilities for close medical and laboratory supervision of patients receiving the drug for psoriasis. Supervision should include complete blood count, urinalysis, serum creatinine, liver function studies, and liver biopsy, if indicated.

Methotrexate should be used only by physicians who are thoroughly familiar with the severe adverse effects, including deaths, associated with the use of anti-metabolite drugs. Deaths that have occurred during methotrexate treatment for psoriasis usually have been preceded by signs and symptoms of bone marrow aplasia (e.g., hemorrhagic enteritis). Patients should be fully informed of the risks involved and closely monitored. The drug should be discontinued promptly in the event of developing renal or hepatic toxicity.

Methotrexate has been marketed for 18 years as an important representative of anti-neoplastic chemotherapy. Use of an anti-neoplastic drug for treatment of an incurable dermatologic con-